

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Clark R. Baker, Jr. et al.

Application No.:

Filed: HEREWITH

For: METHOD AND APPARATUS FOR  
ESTIMATING PHYSIOLOGICAL  
PARAMETERS USING MODEL-BASED  
ADAPTIVE FILTERING

Examiner:

Art Unit:

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR §1.97 and  
§1.98

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

March 22, 2004

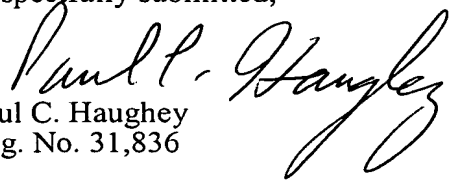
Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. In accordance with 37 CFR §1.98(d), copies of the references can be found in Application No. 10/072,589, filed February 5, 2002 (Attorney Docket No. 009103-009631US). It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430.

Respectfully submitted,

  
Paul C. Haughey  
Reg. No. 31,836

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**INFORMATION DISCLOSURE  
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Page 1 of 5

**Complete if Known**

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Examiner Name	
Attorney Docket Number	09103-009632US

**U.S. PATENT DOCUMENTS**

Examiner	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-3,647,299	03/07/1972	Lavallee	
	2	US-3,704,706	12/05/1972	Herczfeld et al.	
	3	US-4,063,551	12/20/1977	Sweeney	
	4	US-4,086,915	05/02/1978	Kofsky et al.	
	5	US-4,095,117	06/13/1978	Nagy	
	6	US-4,407,290	10/04/1983	Wilber	
	7	US-4,537,200	08/27/1985	Widrow	
	8	US-4,549,551	10/29/1985	Dyck et al.	
	9	US-4,621,643	11/11/1986	New, Jr., et al.	
	10	US-4,649,505	03/10/1987	Zinser, Jr. et al.	
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	12	US-4,705,049	11/10/1987	John	
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	15	US-4,770,179	09/13/1988	New, Jr., et al.	
	16	US-4,773,422	09/27/1988	Isaacson et al.	
	17	US-4,799,493	01/24/1989	DuFault	
	18	US-4,800,495	01/24/1989	Smith	
	19	US-4,802,486	02/07/1989	Goodman et al.	
	20	US-4,819,752	04/11/1989	Zelin	
	21	US-4,824,242	04/25/1989	Frick et al.	
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	37	US-4,955,379	09/11/1990	Hall	
	38	US-4,956,867	09/11/1990	Zurek et al.	

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	39	US-4,958,638	09/25/1990	Sharpe et al.	
	40	US-4,960,126	10/02/1990	Conlon et al.	
	41	US-5,025,791	06/25/1991	Niwa	
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**FOREIGN PATENT DOCUMENTS**

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		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	68	DE	3328862	A1	02/28/1985			<input type="checkbox"/>
	69	EP	0 341 327	A1	11/15/1988			<input type="checkbox"/>

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		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	70	GB	2 166 326		04/30/1986			<input type="checkbox"/>
	71	GB	2 235 288		02/27/1991			<input type="checkbox"/>
	72	WO	92/15955	A1	09/17/1992			<input type="checkbox"/>
	73	SU	1674798	A1	09/07/1991			<input type="checkbox"/>

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**NON PATENT LITERATURE DOCUMENTS**

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	74	BROWN, "Evaluation of Pulse Oximeters using Theoretical Models and Experimental Studies," Cover page-p.2 (1987)	
	75	BROWN, Robert Grover and HWANG, Patrick Y.C., <i>Introduction to Random Signals and Applied Kalman Filtering</i> , (2nd Ed.), (1992), pp. 231-232, 261, John Wiley & Sons, Inc., New York, NY	
	76	CHEN et al., "Adaptive System for Processing of Electrogastric Signals," <i>IEEE Engineering in Medicine &amp; Biology Society, 11th Annual International Conference</i> , (1989), pp. 698-699	
	77	COHEN, A., <i>Biomedical Signal Processing, Volume I, Time and Frequency Domains Analysis</i> , pp. 152-159, CRC Press, Inc., Boca Raton, FL	
	78	HARRIS et al., "Digital Signal Processing with Efficient Polyphase Recursive All-Pass Filters," <i>International Conf. on Signal Processing</i> , (1991), Florence, Italy	
	79	HENDRY, S.D., "Computation of Harmonic Comb Filter Weights," <i>IEEE Transactions on Signal Processing</i> , (1993), pp. 1677-1680, Vol. 41, No. 4	
	80	JINZHENG et al., "Digital Processing of High-Resolution Electrocardiograms-Detection of His-Purkinje Activity from the Body Surface," <i>Biomed. Technik</i> , 33(10):224-230 (1988)	
	81	KLIMASIAUSKAS, "Neural Nets and Noise Filtering," <i>Dr. Dobb's Journal</i> , 14(1):32-48 (1989)	
	82	MOOK et al., "Wavelength dependency of the spectrophotometric determination of blood oxygen saturation," <i>Clinical Chemistry Acta</i> , 26:170-173 (1969)	
	83	MOOK et al., "Spectrophotometric determination of oxygen saturation of blood independent of the presence of indocyanine green," <i>Cardiovascular Research</i> , (1979) 13:233-237	
	84	NEHORAI, A., "A Minimal Parameter Adaptive Notch Filter with Constrained Poles and Zeros," <i>IEEE on Acoustics, Speech, and Signal Processing</i> , (1985), pp. 983-996, Vol. 33, No. 4	
	85	NEHORAI, A. and PORAT, B., "Adaptive Comb Filtering for Harmonic Signal Enhancement," <i>IEEE on Acoustics, Speech, and Signal Processing</i> , (1986), pp. 1124-1138, Vol. 14, No. 5	
	86	NEUMAN, "Pulse Oximetry: Physical Principles, Technical Realization and Present Limitations," <i>CONTINUOUS TRANSCUTANEOUS MONITORING</i> , (1987), pp. 135-144	
	87	RABINER et al., "Theory and Application of Digital Signal Processing," (1975), p. 260, Prentice Hall, Inc., Englewood Cliffs, NJ	
	88	SEVERINGHAUS, "Pulse Oximetry Uses and Limitations," ASA Convention in New Orleans, LA (1989), pp. 1-3	

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	89	STRANG, Gilbert, <i>Introduction to Applied Mathematics</i> , (1986), pp.148-152, Wellesley Cambridge Press, Wellesley, MA	
	90	VARANINI et al., "A Two-Channel Adaptive Filtering Approach for Recognition of the QRS Morphology," <i>COMPUTERS IN CARDIOLOGY</i> , IEEE Computer Society Press, (1992), pp. 141-144	

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